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DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
**DIVISION OF ENVIRONMENTAL PROTECTION**

333 W. Nye Lane, Room 138  
Carson City, Nevada 89706

11 March 2003

NOTICE OF DECISION  
**WATER POLLUTION CONTROL PERMIT  
NUMBER NEV2002105**

**Newmont Mining Company**  
Leeville Infiltration Project

The Nevada Division of Environmental Protection has decided to issue Water Pollution Control Permit NEV2002105 to Newmont Mining Company. This permit authorizes the construction, operation, and closure of approved mining facilities in Eureka County. The Division has been provided with sufficient information, in accordance with Nevada Administrative Code (NAC) 445A.350 through NAC 445A.447, to assure the Division that the groundwater quality will not be degraded by this operation, and that public safety and health will be protected.

The permit will become effective March 26, 2003. The final determination of the Administrator may be appealed to the [State Environmental Commission](#) pursuant to Nevada Revised Statute (NRS) 445A.605 and NAC 445A.407. All requests for appeals must be filed by 5:00 PM, March 21, 2003, on [Form 3](#), with the State Environmental Commission, 333 West Nye Lane, Capitol Complex, Carson City, Nevada 89706-0851. For more information, contact Miles Shaw at (775) 687-9409, toll free in Nevada at (800) 992-0900, extension 4670, or visit the Division website at <http://ndep.nv.gov/admin/public.htm>

Responses to comments received during the public comment period are attached.

## **NDEP-BMRR RESPONSE TO COMMENTS**

**The following letter, copied in its entirety, was received by e-mail on 03 March 2003, from Tom Myers, Executive Director, Great Basin Mine Watch (NDEP responses in *italics*)**

March 3, 2003

Mr. Miles Shaw  
Nevada Division of Environmental Protection  
Bureau of Mining Regulation and Reclamation  
333 W. Nye Lane, Room 138  
Carson City, NV 89706-0851

Re: Permit NEV2002105

Dear Miles:

Thank you for the opportunity to provide the following comments on Newmont's dewatering and infiltration basin proposal for the Leeville Mine. These comments were emailed on March 3 prior to 5:00 PM, and are therefore timely. We visited NDEP offices on Friday, February 21, 2003, to examine the application made by Newmont on this project.

The permit would govern the treatment and discharge of the dewatering water from 14 dewatering wells. Five of the wells are in the Upper Plate aquifer and nine are in the Lower Plate aquifer. The waste rock and ore at the Leeville mine vary substantially around the site. See Table 3-6 in the Leeville draft environmental impact statement (DEIS) which shows meteoric water mobility procedure results for drill hole composite samples. Many samples exceed water quality standards, especially for arsenic. Table 2 in the FEIS shows that 38.5% of the ore has a net acid generating potential (Four Corners Lower CSR Ore and Turf Ore).

***NDEP Response:*** *The Leeville Infiltration Project facilities will treat only groundwater derived from the regional bedrock, which has been tested and shown to meet all Division Profile I water quality standards, except for naturally occurring arsenic. The meteoric water mobility procedure (MWMP) is used to determine the potential for mined materials to leach constituents when exposed to air and precipitation and is not relevant to testing the groundwater being treated.*

Because of the variability just described, it is likely the water quality from each of the wells will vary significantly. The amount being pumped from each well will vary as Newmont optimizes the dewatering. The quality of inflow to the treatment plant will vary according to the amount being pumped from each dewatering well.

The required testing at the surge pond and the discharge pipeline would provide a blended average of the constituents before and after treatment. It is important to understand whether the blended inflow to the treatment plant actually represents the average inflow observed at the treatment plant. Concurrent samples and flow rates from each of the dewatering wells should be taken coincident with the samples from the surge pond. Additionally, it is important to require total flow monitoring from dewatering well. With this information, the testing can be analyzed to determine whether the treatment efficiency shown by the difference between surge pond and discharge pipeline actually reflects the worse conditions the treatment plant be required to treat. Not that Newmont would do this, but it is possible that the source water for the treatment plant inflow (the blended dewatering water) could be manipulated to not include the wells with the worse water quality when the samples are actually being tested. Because of the dewatering optimization

described above, this could be done as a part of the routine optimization done to manipulate dewatering efficiency.

For these reasons, the water pumped from each of the dewatering wells should be tested for constituents on a monthly basis to correspond with the monthly Profile I tests taken at the surge pond at inlet and at the discharge pipeline at inlet. This would supplement the pumping rates required to be monitored at D.1.

**NDEP Response:** *The primary objective of the Leeville Infiltration Project treatment facility and Water Pollution Control Permit (WPCP) NEV2002105 is to ensure that the treated water, at the point of discharge, meets all Division Profile I water quality standards. Newmont Mining Company (NMC) has the responsibility to meet the required standards and must optimize the approved treatment process to achieve WPCP compliance. The required monthly water quality sampling is considered adequate. However, to provide sampling protocol redundancy, Barrick Goldstrike Mines will be independently sampling the Newmont discharge where it enters its own dewatering water treatment system and must maintain compliance with its own WPCP water quality requirements.*

Permit section II.B.3.a. requires that releases “directly into surface or groundwater of any quantity of pollutant... must be reported to the Division as soon as possible,...”. It is obvious what constitutes a discharge to surface water. However, it is not obvious what

constitutes a discharge to groundwater. NDEP should clarify this. Is a spill onto the soil where the depth to groundwater is low considered a discharge to groundwater? Or must it be a direct discharge through a well into an aquifer?

***NDEP Response:*** *The referenced WPCP wording is standard “boiler plate” in all permits and is based on the requirements and intent of Nevada Revised Statute (NRS) 445A.465. To be in compliance, a Permittee must demonstrate, to the satisfaction of the Division, that a spill has not degraded groundwater.*

The fact sheet points out that the two settling ponds will be designed for an average flow rate of 8,330 gpm which implies a total flow rate of 16,660 gpm. The wells are permitted to pump at 25,000 gpm. If such pumping rates are reached, it does not appear the facilities can handle the dewatering rate. Not pumping at the required rate could place the mine at risk. It seems essential that NDEP require Newmont size the system to accommodate the full pumping rate so that there are not spills or discharges of untreated dewatering water. (We note that the peak rate is 12,500 gpm which would seem to imply that 25,000 gpm could be treated for a brief period. As the fact sheet states, however, the peak rate is to be accommodated only when the other pond is closed for maintenance.)

***NDEP Response:*** *It is correct that the maximum flow rate either of the two treated water-settling ponds can handle is 12,500 gallons per minute (gpm). However, this is the maximum rate at which water treatment will meet design objectives and still allow solids to settle. The ponds have sufficient free board and surge capacity for the design flow rates. It is also true that the maximum permitted dewatering rate is 25,000 gpm. However, the maximum dewatering rate of 25,000 gpm is considered a conservative maximum estimate based on the modeling calculations and the measured test well flows. The actual dewatering rate is expected to be lower than the estimate in the early years and much lower after the first two to three years of operation. The actual maximum dewatering rate will not be known until all wells are installed and real conditions are experienced. As a contingency, construction of a third identical treated water settling pond and a second identical dewatering water surge pond are authorized in the WPCP. Ultimately, NMC must manage the system to meet the WPCP requirements.*

The water treatment plant will use a “ferric sulfate coagulation process” to co-precipitate arsenic and antimony. The slurry will be discharged to the existing Mill 4/2 tailings impoundment. Even though the fact sheet states that samples of the settling pond solids have been tested by the Toxic Characteristic Leaching Procedure and...are deemed to be non-hazardous,” it is unlikely that this is true. None of the documents provided to Great Basin Mine Watch during its visit to the NDEP offices on February 21, 2003 had any information about TCLP tests in it. Additionally, since most of the dewatering wells have not even been built, it is not possible that sludge from the actual treatment plant, which has also not yet been built, has been tested using the TCLP. In response to these comments, please provide us with a citation to the document in the NDEP files that have the TCLP test results.

***NDEP Response:*** *The Toxic Characteristic Leaching Procedure (TCLP) testing procedure and results are located in the Proposed Leeville Infiltration Project Application, Newmont Mining Corporation, September 2002, Appendix 'B', Description of Water Treatment Testwork for Leeville. This document is on the shelf in the Bureau with the other Leeville Infiltration WPCP NEV2002105 application documents.*

Thus, we continue our contention (commence in our comments on the Leeville final environmental impact statement) that the sludge is likely to be hazardous and that the Mill 4/2 tailings impoundment is not an appropriate hazardous waste disposal facility. The waste from a water treatment process is not exempt from RCRA by the Bevill amendment. With 360,000 acre-feet of water to be treated (if irrigation water is included), at 0.134 mg/l, there will be approximately 59,500 kg of arsenic to be disposed.

The Bevill amendment exempts from regulation as hazardous "solid waste from the extraction, beneficiation, and processing of ores and minerals, including phosphate rock and overburden from the mining of uranium ore". 42 U.S.C. § 6921(b)(3)(A)(ii), 40 CFR §261.4(b)(7).

The Bevill exclusion for the primary metal sector is limited to extraction/beneficiation wastes and 20 mineral processing wastes. Under Section 3001(b)(3)(A)(ii) of RCRA, the Bevill exclusion is available for "solid waste from the extraction, beneficiation and processing of ores and minerals." Under the Agency's longstanding interpretation, a waste must be "uniquely associated" with mining and processing of ores and minerals to be subject to the Bevill exclusion. 63 Fed. Reg. 28578.

Extraction is the process of removing the ore from the ground. Beneficiation is the process of concentrating the ore. The applicable regulation reads: "For purposes of § 261.4(b)(7) beneficiation of ores is restricted to the following activities; crushing; grinding;...and heap, dump, vat, tank, and in situ leaching." 40 § CFR 261.4(b)(7)(i). There is nothing in the Bevill amendment that could be applied to treating water removed from the ground for discharge to the Humboldt River, to infiltration basins or to be irrigated with.

***NDEP Response:*** *Based on the TCLP test data provided in the application, the ferric oxide-hydroxide solids from the dewatering water treatment facility do not qualify as hazardous. The Federal TCLP regulatory limit for arsenic is 5.0 mg/L. The TCLP result obtained for solids generated from well HDDW1A dewatering water was 0.007 mg/L arsenic. The Mill 4 TSF2 is a fully lined, routinely monitored, and operational component.*

The permit does not require steps to prevent or even monitor the degradation to groundwater that could occur from the recovery of the drawdown water table. As the water table lowers, previously water filled pores become filled with air. The soil remains wet, and the conditions are right for oxidation to occur wherever there is sulfidic rock. As shown above, there is significant acid producing rock around this mine. The recovering water table would leach any products of oxidation which would therefore pollute the groundwater. There is also potential degradation from elevated nitrate from blasting residue. The mine will operate for 18 years; the water table will be drawn down for that long plus the time required to recover. During this time period,

oxidation can occur in any acid rock drainage producing material, whether at the mine or even miles from the mine. Acid producing rock throughout the entire drawdown cone could potentially produce AMD. This permit does not require measures to prevent degradation due to AMD or nitrates nor to even monitor whether such degradation could occur. This permit should include such measures and monitoring.

***NDEP Response:*** *There is no evidence at this facility or elsewhere to support the phenomena described. However, the facility is located within an existing mining area and will be monitored by existing monitoring wells, and additional wells if the Division deems necessary, during the operation and closure periods.*

The permit does not require any monitoring of the receiving waters, the aquifers in the Boulder Valley basin into which the infiltrated waters will flow. Rather, the fact sheet indicates that monitoring will occur under Barrick's permits NEV89068 and NEV 95114. If receiving waters begin to violate standards, will Newmont or Barrick be held responsible?

***NDEP Response:*** *The "receiving water" will be water within the Barrick Goldstrike Mines Boulder Valley Recirculation Project facilities. Any Permittee found in violation of their WPCP limits will be responsible to appropriately address the non-compliance issues.*

There appears to be no monitoring of the waste rock around the Leeville Mine. The reclamation plan for waste rock, as reported in the FEIS, requires that any potentially acid producing rock be encapsulated with 10 feet of neutralizing rock. There was no analysis of whether sufficient neutralizing rock was available. Because of the acid producing potential in the waste rock and potential inability to neutralize it, it would be prudent to have both monitoring wells downgradient of the dumps and to require samples of any water draining through the waste rock.

***NDEP Response:*** *This issue is addressed in the major modification to WPCP NEV90056, currently out for public comment.*

Thank you for considering our comments.

Sincerely,

s/Tom Myers/s     Original sent by regular mail.

Tom Myers  
Executive Director